

# **The United States Nuclear Waste Management Agency**

**Proposed**

**By**

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# **What is the United States Nuclear Waste Management Agency and what would it do?**

**It is a proposed autonomous federal agency, based of a federal corporation model, specializing in providing a full array of radioactive waste management services to the federal government, state and local governments, the commercial nuclear power industry, and other generators of radioactive waste including hospitals, universities, radiopharmaceutical manufacturers, industrial radiographers, well loggers, sheet metal manufacturers, instrument calibrators and many more users of nuclear materials.**

# What is radioactive waste?

**Radioactive waste is comprised of high-level waste (HLW) which consists of spent nuclear fuel, the highly radioactive liquids derived from the reprocessing of spent nuclear fuel and other HLW derived from the nuclear weapons program; uranium and thorium mill tailings; transuranic waste (TRUW) and low-level radioactive waste (LLW or LLRW).**

**LLW consists of radioactively contaminated dry active waste (anti-contamination suits, gloves, booties, rags, dried mop heads, other items of clothing and foot wear, respirators and respirator filters), radioactively contaminated waste from the decommissioning of nuclear power plants, radioactive sealed sources used in medicine and various industrial activities, radioactive laboratory samples, radioactively contaminated nuclear power plant purification filters and spent resin, discarded nuclear power plant components with fixed surface contamination, solidified liquid concentrates and other forms. There are four classes of LLW: Class A (approximately 95% of all LLW generated), Class B, Class C and Greater than Class C (GTCC).**

**As of 2000, approximately 64% of the volume of all LLW generated in the United States was generated by nuclear power plants.**

## How did the proposal originate?

- **After several months during the mid-1990s of corresponding with elected, appointed and career federal and state officials regarding initiatives aimed at eliminating wasteful spending in the federal nuclear waste arena, I finally proposed creating the U.S. Nuclear Waste Management Agency.**
- **Since then I have continued to pursue my proposal because I believe that such an agency, with the right leadership, organization and staff, could quickly prove to be the most practical, responsive and accountable federal entity to finally resolve the multitude of problems currently associated with our civilian and government radioactive waste management programs, and to play the lead role in regaining the respect and trust of the American public for the safe, efficient management of radioactive waste.**

## **What current federal programs could the U.S. Nuclear Waste Management Agency control?**

**The U.S. Nuclear Waste Management Agency could take control of the spent nuclear fuel and high-level radioactive waste program under the U.S. Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM) and Carlsbad Field Office, and other DOE programs and sites that may ultimately host or manage radioactive waste disposal facilities. The agency could also manage the DOE's site cleanup activities, including the processing of highly radioactive waste derived from our nuclear weapons development programs; and promote spent nuclear fuel reprocessing/recycling as a viable alternative to the current lack of a geologic repository and/or operate a geologic repository if one should ever be licensed.**

## How could such an agency be funded?

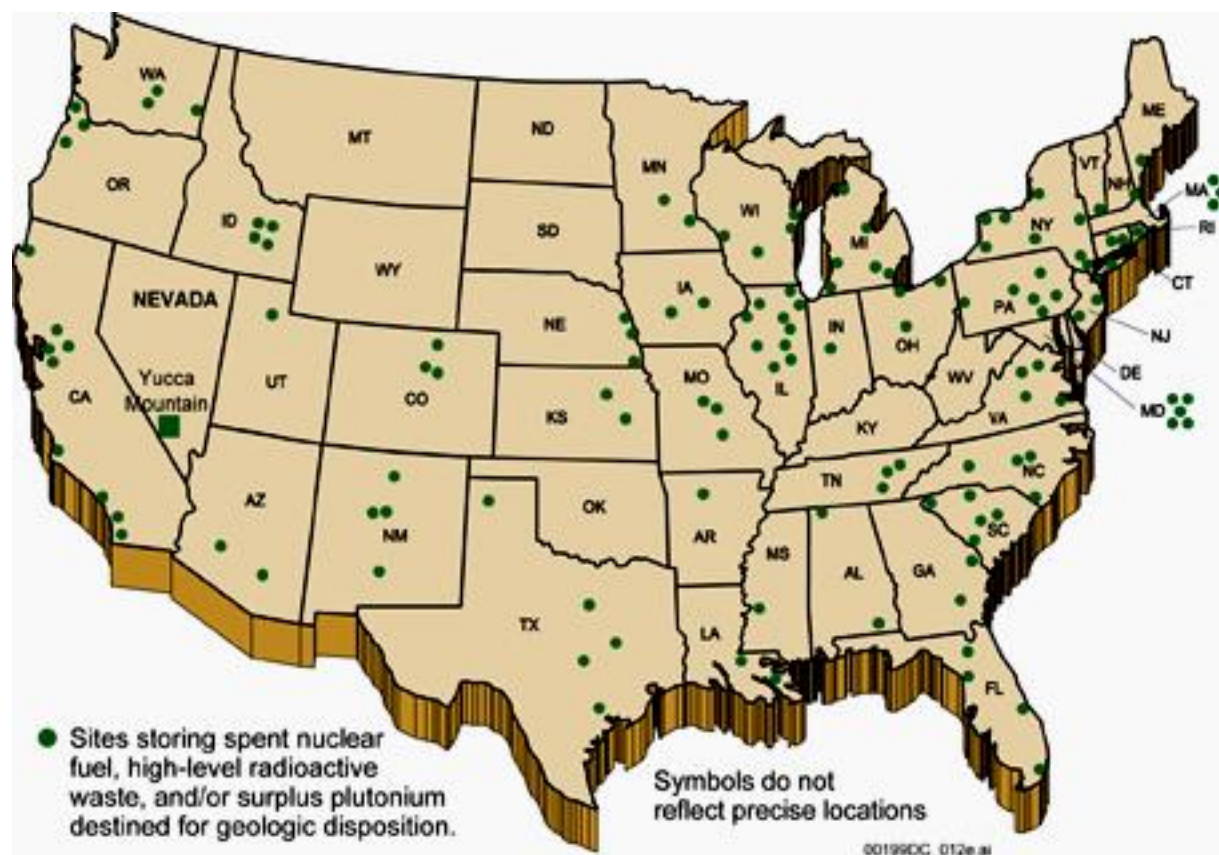
**Ideally, if created, it should be capable of subsisting off the Nuclear Waste Fund and various user services fees, such as LLW and TRUW disposal fees and other fees charged for providing radioactive waste management-related services to its various customers. The intent is to make it financially self-sufficient without having to rely on annual congressional appropriations, and to submit excess revenues to the Treasury Department to help offset the federal budget deficit.**

# Is this a new idea?

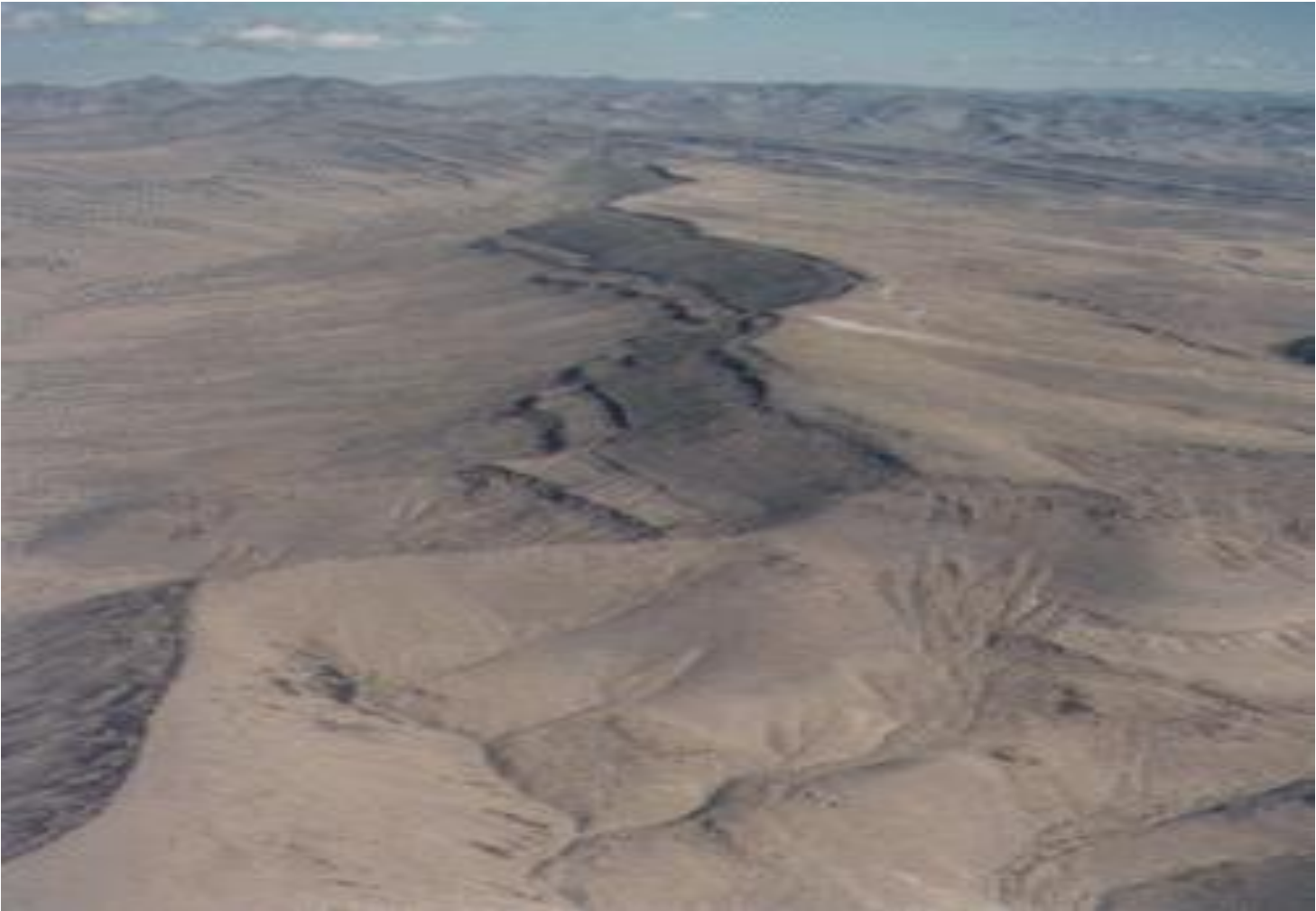
- **Even OCRWM's report Alternative Means of Financing and Managing the Civilian Radioactive Waste Management Program (DOE/RW-0546, August 2001) recommended three different methods of managing its current programs: 1) a Performance Based Organization under OCRWM; 2) an Authority within DOE; and 3) an Independent Federal Authority.**
- **No, although the Nuclear Waste Policy Act of 1982, as amended, assigned to OCRWM the mission of developing and implementing a national program for the safe management of commercial spent nuclear fuel and high-level nuclear waste from Atomic Energy Defense programs, proposals for alternative means of financing and managing OCRWM began as far back as 1984.**
- **In an October 22, 2001 letter from Minnesota Public Utilities Commissioner LeRoy Koppendrayner, Chair, Nuclear Waste Strategy Coalition (NWSC) to Mr. Mitchell E. Daniels, Jr., Director, Office of Management and Budget, the NWSC stated that it believes “a business model should prevail” regarding managing our nation's high-level radioactive waste program currently under OCRWM.**

# **SPENT NUCLEAR FUEL AND HIGH LEVEL WASTE ISSUES**

## CURRENT U.S. SITES STORING SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND/OR SURPLUS PLUTONIUM DESTINED FOR GEOLOGIC DISPOSITION



## YUCCA MOUNTAIN



# **Isn't the DOE applying for an NRC license to operate the Yucca Mountain repository for storing spent nuclear fuel and HLW?**

**After over 30 years of scientific study (the DOE began studying Yucca Mountain as a potential geologic repository site in 1978) and over \$14 billion spent on the Yucca Mountain Project (YMP) as of 2009, on May 7, 2009, President Obama formally asked Congress to halt the Yucca Mountain project. On March 3, 2010, the DOE submitted a motion to the NRC to withdraw the DOE's license application on the Yucca Mountain Geologic Repository.**

**Of the \$14 billion spent on YMP, 20% of the funds (\$2.8 billion) were derived from defense appropriations while 80% of the funds (\$11.2 billion) were derived from the NWF.**

**The DOE stopped studying an alternate site for a geologic repository in 1989; however, in 1983 nine sites were identified as potentially acceptable locations for a geologic repository .**

## What about India or another country reprocessing our commercial spent nuclear fuel?

**The concept has merit, and the Obama Administration has recently announced an agreement with India to reprocess our spent nuclear fuel. However, from a national security perspective, and the need to prevent weapons-grade fissile materials from falling into the hands of hostile or potentially hostile nations seeking to advance their own nuclear weapons programs, this may not be the most desirable course of action.**

# **CURRENT STATUS OF LAWSUITS AGAINST THE DOE**

**In August 2004, the DOE settled a lawsuit by the Exelon Corporation, the nation's largest nuclear power plant operator, for \$80 million in past costs for spent nuclear fuel storage. Without Yucca Mountain, Exelon will get \$300 million through 2010 and \$600 million through 2015, after which the cost to keep waste on-site would escalate.**

**On September 30, 2006, the U.S. Court of Federal Claims ruled in favor of three New England companies who sued the Federal Government for breach of contract regarding the contracts the DOE entered into with each company. Yankee Atomic was awarded \$32.9 million, Connecticut Yankee was awarded \$34.1 million and Maine Yankee was awarded \$75.8 million; nearly \$150 million dollars total in damages.**

**In 2007, Southern Company won a \$77 million judgment against the DOE. Although the case is under appeal, Southern is readying a second lawsuit related to more recent costs associated with storing spent nuclear fuel.**

**On December 13, 2007, the Yankee Companies filed a second award of damages claim. Maine Yankee is seeking an additional \$43 million in damages for the period of January 1, 2003 to January 31, 2008. A decision on this claim is expected in 2010.**

**On February 28, 2010, the U.S. Court of Federal Claims awarded Energy Northwest \$56.859 million in its lawsuit against the DOE for failing to accept and dispose of spent nuclear fuel.**

**The potential total liability in judgments against the DOE could be more than \$60 billion.**

**On April 2, 2010, the National Association of Regulatory Utility Commissioners filed a lawsuit against the DOE in the U.S. Court of Appeals for the District of Columbia Circuit in an attempt to get the DOE to stop collecting Nuclear Waste Fund fees.**

**On April 5, 2010, the Nuclear Energy Institute and 16 nuclear utilities filed a lawsuit against the DOE in the U.S. Court of Appeals for the District of Columbia Circuit in an attempt to get the DOE to stop collecting Nuclear Waste Fund fees.**

**On April 14, 2010, the State of Washington filed a lawsuit in the U.S. Court of Appeals for the District of Columbia Circuit requesting that the court issues a permanent injunction requiring the DOE to continue to fulfill its obligations with respect to the Yucca Mountain Project. On May 7, 2010, the U.S. Court of Appeals denied the state's injunction.**

# **Other Issues Impacting the Off-Site Storage of Spent Nuclear Fuel**

**On February 21, 2006 the U.S. Nuclear Regulatory Commission issued a license to Private Fuel Storage, LLC, to build and operate its proposed temporary spent nuclear fuel storage facility on the Skull Valley Goshute reservation in Skull Valley, Utah.**

**However, on September 7, 2006 the U.S. Department of the Interior disapproved the proposed long-term lease of the reservation land and disapproved both right-of-way applications to deliver spent nuclear fuel to the facility. Both decisions appear to have been influenced principally on the ongoing uncertainty of the availability of the Yucca Mountain Geologic Repository.**

# **LOW-LEVEL WASTE ISSUES**

# Why is there a need to address commercial low-level radioactive waste disposal?

- **The Low-Level Radioactive Waste Policy Act of 1980, as amended in 1985, has not lived up to the original expectations of the legislation.**
- **Despite having collectively spent about \$600 million attempting to develop about 10 sites, the host states for seven of the regional low-level radioactive waste compacts have not developed sites. To make matters worse, on July 1, 2008, the Barnwell, South Carolina disposal facility was restricted to only accepting LLW from generators within the Atlantic Interstate Low-Level Radioactive Waste Compact hosted by South Carolina, effectively denying LLW disposal services to 37 states, the District of Columbia and Puerto Rico. Texas is in the process of licensing a LLW disposal facility for the Texas Interstate Low-Level Radioactive Waste Compact comprised of Texas and Vermont.**
- **Previous LLW disposal facilities in IL, KY, NV and NY are no longer in operation. These facilities were operating before the Low-Level Radioactive Waste Policy Act of 1980.**
- **In 2004, Nebraska paid a fine of \$141 million imposed by a federal court because the state did not honor its promise to provide a low-level radioactive waste disposal site in support of the other member states in the Central Interstate Low-Level Radioactive Waste Compact.**
- **The States of Alabama, Florida, Tennessee, and Virginia and the Southeast Compact Commission for Low-Level Radioactive Waste Management filed a lawsuit in the U.S. Supreme Court in June of 2002 to enforce \$90 million in sanctions against the State of North Carolina. The suit alleges that North Carolina failed to comply with the provisions of the Compact laws and did not meet its obligations as a member of the Compact. The U.S. Supreme Court decided in favor of North Carolina on June 1, 2010.**

## **Wasn't the federal government originally intended to be responsible for the disposal of low-level wastes?**

- **Concerned about the potential loss of capacity for the disposal of commercially generated low-level wastes, congressional committees considered legislation in 1979 that would make the federal government responsible for the disposal of these wastes, but deferred consideration of legislation to the next year.**
- **Subsequently, the National Governor's Association recommended that the states be responsible for the development, as well as the regulation, of disposal facilities for commercially generated low-level radioactive wastes.**

# What's the current status of our commercial low-level radioactive waste disposal program?

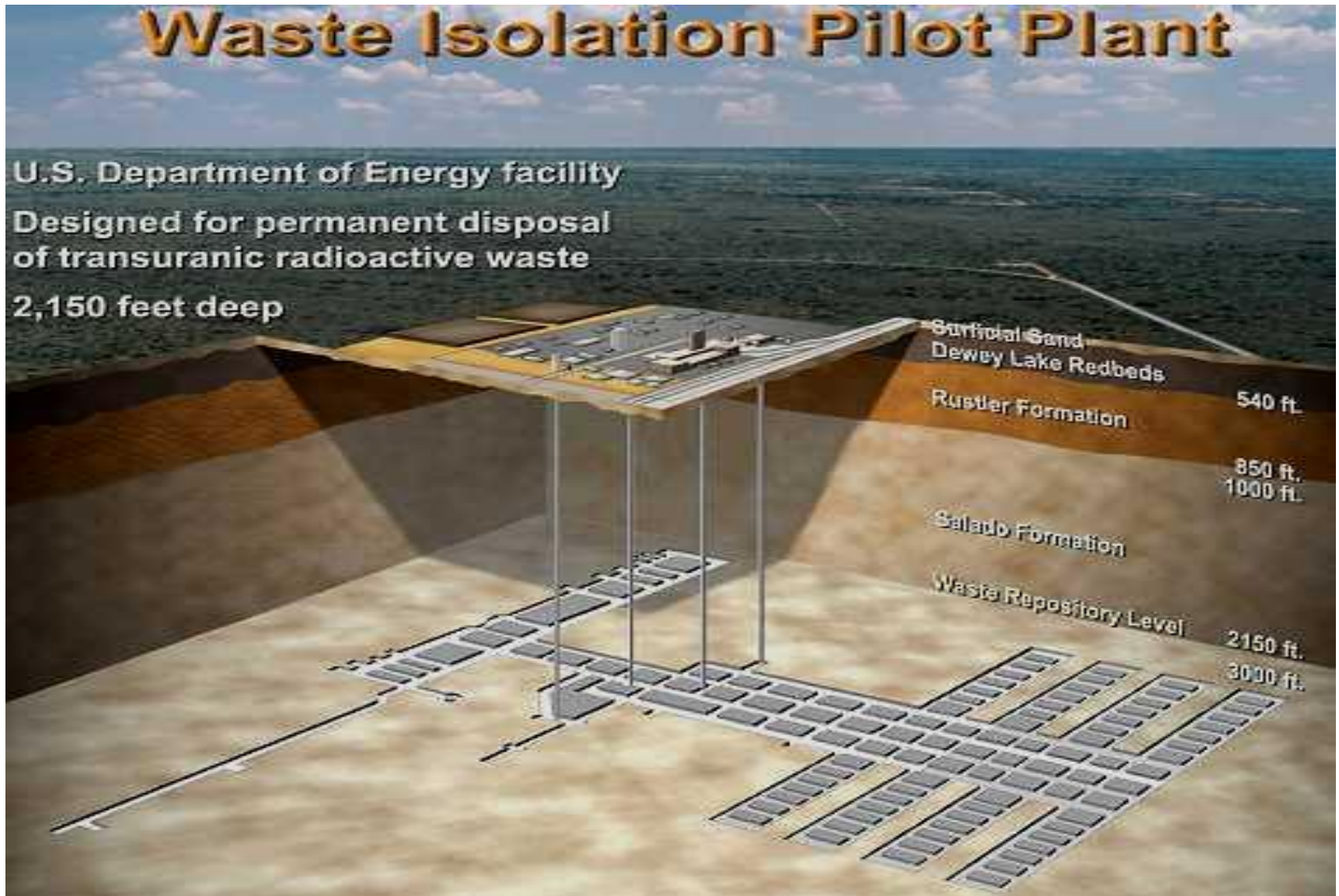
- **Presently, three commercial facilities are accepting wastes:**
  - 1) the Atlantic Interstate Compact's Barnwell, South Carolina facility, operated by Chem-Nuclear Systems, LLC (Classes A, B and C, and it stopped accepting LLW from non-compact generators in July 2008),**
  - 2) the Northwest Interstate Compact's Richland, Washington facility, operated by US Ecology (Classes A, B and C, and now only accepts LLW from generators within its compact member states and other generators that have been grandfathered), and**
  - 3) the Envirocare of Utah facility (presently Class A and mixed wastes only, and available to generators in all states except those in the eight-state Northwest compact). Was not developed in response to the 1980 and 1985 compact Acts.**
- **One new LLW disposal facility in Andrews County, TX, operated by Waste Control Specialists, LLC (WCS), has been licensed and is still being constructed. The intent of this facility is to accept Classes A, B and C LLW from Texas and Vermont for near-surface disposal, and to operate a federal LLW disposal facility. WCS is hoping to receive approval from the Texas Low-Level Radioactive Waste Disposal Compact Commission to expand its license to accept waste from all of the remaining states that don't have such facilities available. However, some fear the Texas State Legislature might restrict WCS' operation to only accepting LLW generated within Texas and Vermont. One of the chief concerns is the economic impact on the state should the privately operated WCS site leak and contaminate the Ogallala Aquifer, the largest aquifer in the country; and WCS is a limited liability company.**

# What role does the DOE play in the disposal of low-level radioactive wastes?

- **The DOE is still responsible for the disposal of GTCC LLW. The now defunct Yucca Mountain Project would have been the ideal disposal facility for GTCC LLW. Also, in March 1999, DOE estimated that it may generate over 300 million cubic feet of LLW over about the next 70 years as it cleans up many of its former nuclear weapons facilities; and some of that waste will be GTCC.<sup>2</sup> However, the Waste Isolation Pilot Plant in Carlsbad, NM could serve as a suitable GTCC LLW disposal site.**
- **In a effort to overcome the apparent failure of the regional waste compact groups, many believe the DOE should be responsible to dispose of commercially generated low-level radioactive waste; especially those who believe that state governments would successfully frustrate attempts to develop new disposal facilities under the compact and free market approaches.**

<sup>2</sup>The DOE could be a source of significant revenue for the U.S. Nuclear Waste Management Agency.

# WIPP – COULD BE LICENSED UNDER 10CFR61, LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE



# **What are some of the arguments against DOE taking on the commercial low-level radioactive waste disposal program?**

- **The states of Nevada and Washington are the least likely to accept this approach because of the volumes of the wastes that are currently stored at the Nevada Test Site and Hanford Site.**
- **Doing so could adversely affect DOE's negotiations with states and other interested parties on acceptable solutions to cleanup problems throughout DOE's complex of nuclear facilities. This could also place an additional burden on a federal department that has often been criticized by states and other interested parties for what they have characterized as its poor performance in cleaning up its facilities.**
- **The DOE self-regulates its own disposal operations, thereby preventing the NRC or an affected agreement state from exercising any regulatory authority over its operations. Further, due to the DOE's long history of self-regulation, many are confident the DOE would be reluctant to accept external regulatory oversight.<sup>3</sup>**

<sup>3</sup>One intent of my proposal is to create an agency that would be accountable to such external regulatory authorities.

# What are some of the other arguments against the DOE managing LLW disposal programs?

- In addition to the arguments that I have previously presented, perhaps the single most significant one is that the DOE has been criticized by the GAO for the lack of technical and management skills on the part of the DOE staff needed to oversee complex operations, especially in the nuclear arena. As an example, at an Idaho facility, the DOE turned to a private contractor, in part, because it lacked the technical expertise needed to evaluate technical cleanup proposals. Reference: Major Management Challenges and Program Risks: Department of Energy, GAO/OCG-99-6, January 1999.
- Also, in the past the DOE has had difficulty completing large projects, and many of those projects have experienced excessive cost overruns, such as the In-Tank Precipitation (ITP) Project at the Savannah River Site (nearly \$500 million invested before the project was cancelled 10 years after it was supposed to have been in service). Please feel free to refer to: Process to Remove Radioactive Waste From Savannah River Tanks Fails to Work, GAO/RCED-99-69, April 1999, for the GAO's report on the ITP Project.

# **ADDITIONAL INFORMATION ON THE PROPOSED AGENCY AND SNF**

# How would the U.S. Nuclear Waste Management Agency be different from the DOE in terms of management and technical expertise?

- **Another intent of my proposal is to create an agency that is committed to attracting and recruiting individuals who possess proven, hands-on experience in radioactive waste management, nuclear power operations, and other comparable military and civilian programs, especially individuals accustomed to working in a highly regulated environment and committed to safety, accuracy and expediency in accomplishing their assigned tasks.**
- **The agency must be committed to the highest standards of safety and efficiency in all programs and at all levels. To ensure such standards are consistently maintained, the selection of candidates to serve in the various levels of management must be focused on selecting individuals who possess exceptional leadership skills, who can function effectively in a multi-tiered teamwork environment, and who can demonstrate managerial and technical competency in the programs over which they are assigned to lead.**

## **Have you received any comments from the DOE regarding your qualification requirements?**

- **The following comment was received in a January 19, 2000 letter from the Director, Waste Acceptance and Transportation Division, DOE Office of Civilian Radioactive Waste Management in response to some questions that I asked in a letter that I sent to Secretary of Energy Bill Richardson:**

**“Your last question asked what percentage of the executive staff in the Office of Civilian Radioactive Waste Management that actually have hands-on commercial nuclear power radioactive waste management experience. Without clarification as to what constitutes ‘executive staff’ and ‘hands-on commercial nuclear power radioactive waste management experience’ a numerical value would be impossible to determine.”**

# **What other programs should the U.S. Nuclear Management Agency have that could distinguish it from other federal agencies?**

- **An Inspector General team, comprised of individuals who are extremely knowledgeable in their respective fields, that will make announced staff assistance visits and unannounced inspections.**
- **An IG Hotline whereby employees at all levels can report any violations of pertinent regulations, license conditions, policies or procedures, and other issues negatively impacting the mission of the agency, including acts of mismanagement and corruption, without fear of reprisal if their concerns have not been satisfactorily resolved at the site management level or if they feel justified in circumventing the site management.**
- **A tuition assistance program for encouraging professional growth; a bona fide employee awards and recognition program for rewarding outstanding performance; a realistic employee performance evaluation program; an agency-wide training program accredited to nuclear industry standards; and a system for promoting employees based on the compilation of points assessed for performance evaluations, job skills knowledge examination results, time in grade, time in service and awards.**

# **You previously mentioned spent nuclear fuel reprocessing, what are the advantages of spent nuclear fuel reprocessing?**

- **According to a March 27, 1998 update to a 1996 Congressional Research Service report for Congress, reprocessing spent nuclear fuel could dramatically reduce the total high-level radioactive waste volume required to be stored in a geologic repository by separating the plutonium (about 1%) and uranium (about 95%), and then using the plutonium and the uranium to make mixed-oxide (MOX) fuel. Most U.S. nuclear plants could load at least a third of their reactor cores with MOX fuel.**
- **The remaining liquid high-level waste could be vitrified (dissolved in molten glass) or be further reduced in volume by the transmutation process with the aid of a device such as a particle accelerator.**
- **According to an Associated Press release dated Friday, May 17, 2002, on May 16, 2002 Energy Secretary Spencer Abraham conceded to both of Nevada's U.S. senators that the Yucca Mountain repository as currently envisioned could handle only a fraction of the waste expected to be generated by commercial nuclear power plants and may have to be expanded in the coming decade.**

# What are some of the comments that you have received from various officials regarding your proposal?

- **In a letter from Vice President Al Gore dated April 3, 1997 – “Please be assured that I understand the concerns you have expressed about nuclear waste disposal. We are committed to a program of radioactive waste management that is safe, efficient, and effective for the long term.”**
- **In a letter from U.S. Congressman Bill Luther (DFL-MN) dated May 29, 1997 – “I believe that the federal government should live up to its prior commitments, including its 1982 promise to establish a centralized nuclear waste storage site in a timely manner.”**
- **In a letter from U.S. Senator Strom Thurmond (R-SC) dated June 16, 1997 – “Thank you for sending me a copy of your letter to Senator Rod Grams concerning spent nuclear fuel programs.” I am certain that it will be of benefit to me and my staff as relevant matters come before the Senate.”**
- **In a letter from the late U.S. Congressman Bruce Vento (DFL-MN) dated September 8, 1997 – “While the question of how best to reform Federal nuclear waste policy is a subject of debate in Congress, there can be no doubt that we must resolve the problem of on-site storage shortages faced by many nuclear facilities throughout the country.”**
- **In a letter from U.S. Congressman Jim Ramstad (R-MN) dated June 22, 1998 – “I believe the federal government needs to provide a solution to the problem of spent nuclear fuel.”**

# **Additional comments received on my proposal.**

- **In a letter from U.S. Senator Trent Lott (R-MS) dated February 10, 1999 - “Over 15 years ago, Congress directed the Department of Energy to take responsibility for disposal of nuclear waste created by nuclear power plants.”**
- **In a letter from U.S. Congresswoman Judy Biggert (R-IL) dated April 6, 1999 – “The issue of nuclear waste is certainly one of priority to me, as Illinois is one of the top nuclear waste producers.”**
- **In a letter from U.S. Senator Peter Fitzgerald (R-IL) dated April 22, 1999 – “This issue is of critical importance to Illinois, which is home to 11 nuclear power facilities. The problem is compounded by the fact that the U.S. Department of Energy has collected billions of dollars from Illinois residents and companies to finance nuclear waste management but has yet to take custody of the waste or even approve a site for disposal.”**
- **In a letter from Illinois Commerce Commissioner Ruth Kretschmer dated May 6, 1999 – “Your proposal is certainly unique and interesting but I believe it would be extremely difficult to implement.”**
- **In a letter from Mr. R. M. Krich, Vice President – Regulatory Services, Commonwealth Edison Company (now Exelon Nuclear) dated May 7, 1999 – “Our current projections indicate we will need to supplement our existing storage capacity for spent fuel at our operating reactors as early as 2003. In light of our situation, we are open to new ideas to resolve the issue in an expeditious manner.” “Your proposal is innovative and accordingly, I have taken the time to review it with the key people in ComEd who are responsible for the high-level waste issue.” “Our reviews have concluded however, that the only way to be successful in resolving this issue is to continue to work with the industry and our trade organization, the Nuclear Industry Institute, towards the passage of high-level waste legislation in the Congress.”**

# Even more comments received on my proposal.

- **In a letter from U.S. Senator Richard Durbin (D-IL) dated October 21, 1999 – “You can be certain that I fully recognize the special significance of this issue to Illinois. Thousands of tons of high-level nuclear waste are currently stored at nuclear power plants in Illinois and other states. Many of these plants are expected to run out of storage space before a permanent repository is made available.”**
- **In a letter from President (then-Texas Governor and Candidate for President) George W. Bush dated February 3, 2000 – “I appreciate having the benefit of your views, and I have passed the information on to my policy staff.”**
- **In a letter from Illinois Senate President and Majority Leader James “Pate” Philip (R) dated June 19, 2000 – “I read it with great interest and cannot agree with you more. Something must be done. There is no time to procrastinate.”**
- **In a letter from Citizens Against Government Waste President Thomas Schatz dated September 28, 2000 – “Again, I would like to thank you for taking the time to keep me posted on your efforts to create the U.S. Nuclear Waste Management Agency and for your interest and efforts in this important policy area.”**
- **In a letter from the Speaker of the U.S. House of Representatives J. Dennis Hastert (R-IL) dated July 9, 2001 – “With respect to the creation of a Nuclear Waste Management Agency, I have forwarded your proposal to the Department of Energy for their review.”**
- **In an E-mail message from the DOE’s Yucca Mountain Project sent on April 4, 2002 – “Your letter to President George W. Bush regarding nuclear waste disposal was forwarded to the Yucca Mountain Site Characterization Office for response.”**

## **Finally, what is the most significant comment you have received regarding the DOE?**

**In a letter from U.S. Senator Rod Grams (R-MN) dated June 4, 1996 – “The DOE is a prime example of a bureaucracy searching for a mission and wasting taxpayer dollars in the process. As a member of the Senate Energy & Natural Resources Committee, I have been increasingly disturbed by the fact that over 85% of the DOE budget is expended upon non-energy related initiatives. Of the energy related programs DOE is charged with, they have failed to meet their mission goals.”**